What is claimed is:

1. An apparatus for use within a communication system having an antenna circuit with an inductive coil and a tuning capacitor connected to the inductive coil at a node, wherein the communication system further includes an amplifier connected to the node through a DC blocking capacitor to receive an induced signal in the inductive coil in a receive mode, and a driver connected to the antenna circuit to energize the inductive coil with a driven signal in a transmit mode, the apparatus comprising:

means to transform the inductive coil, the tuning capacitor and the DC blocking capacitor into a series resonant circuit to reduce an inductive load in the transmit mode; and

means to transform the inductive coil, the tuning capacitor and the DC blocking capacitor into a parallel resonant circuit to increase an inductive load in the receive mode.

2. The apparatus of claim 1, further comprising means to protect integrated circuitry (IC) from high voltages at the node of the antenna circuit in the transmit mode.

3. The apparatus of claim 2, wherein the means to protect integrated circuitry (IC) from high voltages includes an IC shunt switch to selectively couple the DC blocking capacitor to a reference potential.

4. The apparatus of claim 1, wherein the means to transform the inductive coil, the tuning capacitor and the DC blocking capacitor into a series resonant circuit includes means to connect the DC blocking capacitor in parallel across the tuning capacitor to form the series resonant circuit.

5. The apparatus of claim 1, wherein the means to transform the inductive coil, the tuning capacitor and the DC blocking capacitor into a parallel resonant circuit

includes means to connect the inductive coil in parallel across the tuning capacitor and in parallel across a capacitance of the DC blocking capacitor in series with an IC capacitance.

6. The apparatus of claim 1, wherein the antenna circuit has a first terminal connected to the inductive coil and a second terminal connected to the tuning capacitor, and the means to transform the inductive coil, the tuning capacitor and the DC blocking capacitor into a parallel resonant circuit to increase an inductive load in the receive mode includes a terminal switch to ground the first terminal and the second terminal.

7. An apparatus for use within a communication system having an antenna circuit with a first terminal, a second terminal, a node, an inductive coil connected between the first terminal and the node, and a tuning capacitor connected between the second terminal and the node, the communication system further including an amplifier connected to the node through a DC blocking capacitor to receive an induced signal in the inductive coil in a receive mode, and a driver connected to the antenna circuit to energize the inductive coil with a driven signal in a transmit mode, the apparatus comprising:

a first switch to:

connect the first terminal and the second terminal of the antenna circuit to a reference potential in the receive mode such that the inductive coil is connected in parallel across the tuning capacitor; and

connect the antenna circuit to the driver in the transmit mode; and

a second switch connected to a node between the DC blocking capacitor and the amplifier to shunt an integrated circuit (IC) capacitance in the transmit mode to protect the amplifier from high voltages generated at the node in the transmit mode.

8. The apparatus of claim 7, wherein the first switch is adapted to ground the first terminal and the second terminal.

9. The apparatus of claim 7, wherein the TR switch is adapted to switch between transmitting and receiving inductive signals for a wireless hearing aid.

10. A communication system, comprising:

an antenna element having a first terminal, a second terminal and a node, the antenna element including an inductive coil connected between the first terminal and the node and a tuning capacitor connected between the second terminal and the node;

a DC blocking capacitor connected to the node of the antenna element;

integrated circuitry, including:

an amplifier connected to the node of the antenna through the DC blocking capacitor to receive a first communication signal induced in the inductive coil in a receive mode;

a driver to energize the inductive coil with a second communication signal in a transmit mode; and

a transmit-receive switch (TR switch) responsive to a control signal to:

pull the first and second terminals of the antenna element to a reference potential during the receive mode; and

operably connect the driver to at least one of the first and second terminals of the antenna element, and energize the inductive coil during the transmit mode.

11. The communication system of claim 10, wherein the TR switch is responsive to the control signal to ground the first and second terminal of the antenna element during the receive mode.

12. The communication system of claim 10, further comprising a shunt switch responsive to the control signal to ground a node between the DC blocking capacitor and the amplifier during the transmit mode.

13. The communication system of claim 10, further comprising signal processing circuitry connected to the amplifier to receive an amplified signal representative of the first communication signal, and connected to the driver such that the driver is able to energize the inductive coil with the second communication signal.

14. The communication system of claim 10, wherein the signal processing circuitry is adapted to provide the control signal indicative of the transmit mode and the receive mode.

15. The communication system of claim 10, wherein the communication system is incorporated in a wireless hearing aid and is adapted to inductively communicate with inductive devices.

16. A hearing aid, comprising:

a hearing aid receiver to present sound to an ear;

a microphone system to receive acoustic signals;

an antenna element to transmit and receive inductive signals, the antenna element including:

a first terminal, a second terminal and a node;

an inductive coil connected between the first terminal and the node; and

a tuning capacitor connected between the second terminal and the node;

a DC blocking capacitor connected to the node of the antenna element; and

signal processing circuitry connected to the microphone system to process received acoustic signals and present the processed signals to the hearing aid receiver, and connected to the antenna element to process the received inductive signals, the signal processing circuitry including a transmit-receive switch responsive to a control signal to configure the antenna element in a parallel resonant

circuit in a receive mode, and to configure the antenna element in a series resonant circuit in a transmit mode.

17. The hearing aid of claim 16, wherein the transmit-receive switch includes:

a first switch to connect the first terminal and the second terminal of the antenna circuit to a reference potential in the receive mode such that the inductive coil is connected in parallel across the tuning capacitor; and

a second switch connected to a node between the DC blocking capacitor and the amplifier to shunt an integrated circuit (IC) capacitance in the transmit mode to protect the signal processing circuitry from high voltages generated at the node in the transmit mode.

18. The TR switch of claim 17, wherein the first switch is adapted to ground the first terminal and the second terminal in the receive mode.

19. A method for switching between a transmit mode and a receive mode in a wireless communication system having a single antenna element and a DC blocking capacitor connected between an amplifier and a node of the antenna element, the method comprising:

determining a mode of operation for the communication system;

transforming the antenna element into a high-impedance parallel resonant circuit in a receive mode; and

transforming the antenna element into a low-impedance series resonant circuit in a transmit mode.

20. The method of claim 19, wherein transforming the antenna element into a high-impedance parallel resonant circuit in the receive mode includes grounding a first terminal and a second terminal of the antenna element.

21. The method of claim 19, wherein transforming the antenna element into a high-impedance parallel resonant circuit in the receive mode connecting the

inductive coil in parallel across the tuning capacitor and in parallel across an equivalent capacitance for both the DC blocking capacitor and an integrated circuit (IC) capacitance.

22. The method of claim 19, wherein transforming the antenna element into a low-impedance series resonant circuit in the transmit mode includes connecting the inductive coil in series with the tuning capacitor and the DC blocking capacitor.

23. The method of claim 19, wherein transforming the antenna element into a low-impedance series resonant circuit in the transmit mode includes connecting the DC blocking capacitor between the node of the antenna element and ground in the transmit mode.

24. The method of claim 19, wherein the mode of operation for the communication system defaults to the receive mode.